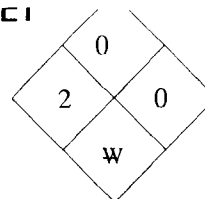


**alphametals**600 Route 440  
Jersey City, New Jersey 07304  
Telephone 201-434-6778NUMBER 859  
REVISION 04/01/99  
PAGE 1**SECTION I. GENERAL INFORMATION**

PRODUCT NAME (NUMBER) 53945 Flo-Temp "Lead-Free" Solder

CHEMICAL FAMILY Inorganic Metals.

D.O.T. HAZARD CLASS Not regulated.

**SECTION II. HAZARDOUS INGREDIENTS**

INGREDIENTS	CAS NUMBER	WEIGHT PERCENT	OSHA PEL	ACGIH TLV
Tin	7440-31-5	93-97	2.0 mg / cum	2.0 mg / cum
Silver	7440-22-4	25-1.0	0.01 mg / cum	0.1 mg / cum
Copper	7440-50-8	3-6	0.1 mg / cum	0.2 mg / cum
Flux:				
Zinc chloride fume	7646-86-7	20-45	1 mg / cum	1 mg / cum
Ammonium chloride fume	12125-02-9	5-15	NL	10 mg / cum
Hydrochloric Acid	7647-01-0	3-8	7 mg / cum	7 mg / cum

**SECTION III. PHYSICAL DATA**

(PUBLISHED OR ESTIMATED VALUES)

BOILING POINT Deg F. (760 mm Hg)	NA	SPECIFIC GRAVITY (H <sub>2</sub> O=1)	NA
VAPOR PRESSURE (mm Hg at 20 Deg. C.)	NA	% VOLATILE BY WEIGHT	NA
VAPOR DENSITY (AIR=1)	NA	EVAPORATION RATE	NA
SOLUBILITY IN WATER	Insoluble	pH	NA
APPEARANCE AND ODOR	Silver-gray metal wire, odorless, various sizes.		

**SECTION IV. FIRE AND EXPLOSION HAZARD DATA**

ESTIMATED FLAMMABLE LIMITS (% By Volume in Air) LEL: NA UEL: NA

FLASH POINT Deg F. None.

EXTINGUISHING MEDIA NA

SPECIAL FIRE  
FIGHTING  
PROCEDURES Use NIOSH approved self-contained breathing apparatus if involved in a fire.

UNUSUAL FIRE  
AND EXPLOSION  
HAZARD None.

NA - NOT APPLICABLE

NE - NOT ESTABLISHED

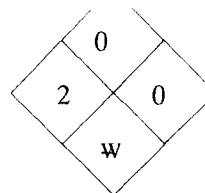
NL - NOT LISTED

UN - UNKNOWN



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## SECTION V.(A) HEALTH HAZARD DATA

(Symptoms/Effects Of Overexposure)

**ROUTES OF EXPOSURE:** Inhalation of dusts or fumes.

**ACUTE EFFECTS:** Excessive inhalation of fumes from many metals can produce an acute reaction known as "metal fume fever". Symptoms consist of chills and fever (very similar to and easily confused with flu symptoms) which come on a few hours after large exposures. Long term effects of metal fume fever have not been noted.

**CHRONIC EFFECTS:** Chronic inhalation of tin oxide or fume leads to benign pneumoconiosis without symptoms of interference with pulmonary function.

See Section X for additional health information.

## SECTION V.(B) HEALTH HAZARD DATA

(Emergency and First Aid Procedures)

INHALATION	If accute overexposure to fumes occurs, remove victim from the adverse environment and seek medical attention.
INGESTION	If particles are ingested, give 1-2 glasses of water or milk. Induce vomiting only if victim is fully conscious and not convulsed. All ingestion cases should receive immediate medical attention.
SKIN CONTACT	If dust or mist gets on the skin, wash the contaminated area with soap and water. Remove contaminated clothing and launder before reuse.
EYE CONTACT	Flush with large amounts of water. Get medical aid.

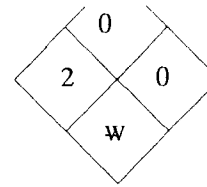
## SECTION VI. REACTIVITY DATA

STABILITY		CONDITIONS	None.
STABLE: X	UNSTABLE:	TO AVOID	
INCOMPATABILITY (Materials to Avoid)	Chloride and turpentine.		
HAZARDOUS DECOMPOSITION PRODUCTS	None.		
HAZARDOUS POLYMERIZATION WILL OCCUR:	WILL NOT OCCUR;	X	CONDITIONS TO AVOID
			None.



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## SECTION VII. SPILL OR LEAK PROCEDURES

### STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED

Minimal problems with spills of this product would occur because of its solid form. If airborne dust is generated during the cleanup, use an appropriate NIOSH-approved respirator.

WASTE DISPOSAL Scrap should be reclaimed in accordance with solder waste minimization practices.

Must be in accordance with Federal, State and Local Laws and Regulations

## SECTION VIII. SPECIAL PROTECTION

RESPIRATORY	When engineering or administrative controls are not feasible to control overexposure or while they are being instituted, appropriate NIOSH-approved respirators should be used and selected according to 29CFR 1910.134.
EYEWEAR	Personal protective equipment for eyes should be worn when there is a reasonable probability of injury during use.
CLOTHING/ GLOVES	As needed to protect against physical hazards.
VENTILATION	Local exhaust ventilation should be provided to keep worker exposures within allowable limits during use.

## SECTION IX. SPECIAL PRECAUTIONS

### PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING

Food and drink should not be consumed or tobacco products used, nor cosmetics applied in areas where solder may be used. Always wash hands after handling solder and before eating, drinking or smoking.

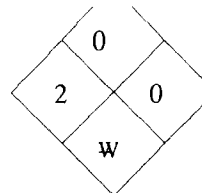
### OTHER PRECAUTIONS:

Containers: Since empty containers may retain product residues (vapor, liquid, or solid) all labeled hazard precautions must be observed. **FOR INDUSTRIAL USE ONLY. KEEP OUT OF REACH OF CHILDREN. DO NOT TAKE INTERNALLY.**



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## SECTION X. ADDITIONAL INFORMATION

HEALTH HAZARD DATA: (continued)

SILVER: Chronic exposure to fumes may result in bronchitis.

COPPER: No long term effects from inhalation or ingestion reported.

TARGET ORGAN EFFECTS: (NIOSH) Eyes, skin and respiratory system.

MEDICAL CONDITIONS AGGRAVATED: Diseases of the respiratory system.

CARCINOGENS: None.

### ----- REGULATORY INFORMATION -----

Toxic Substance Control Act (TSCA) Status:

All ingredients of this product are listed on the TSCA inventory.

SARA TITLE III (Section 313):

Components present in this product at a level which could require reporting under the statute are:

Silver - Copper - Hydrochloric Acid

## EMERGENCY TELEPHONE NUMBER

CHEMTREC

1-800-424-9300

DAY OR NIGHT

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